

# Social Media Buzz Around Super Bowl Ads

GameDay Analytics Challenge 2021

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## Executive Summary, Risks, and Assumptions

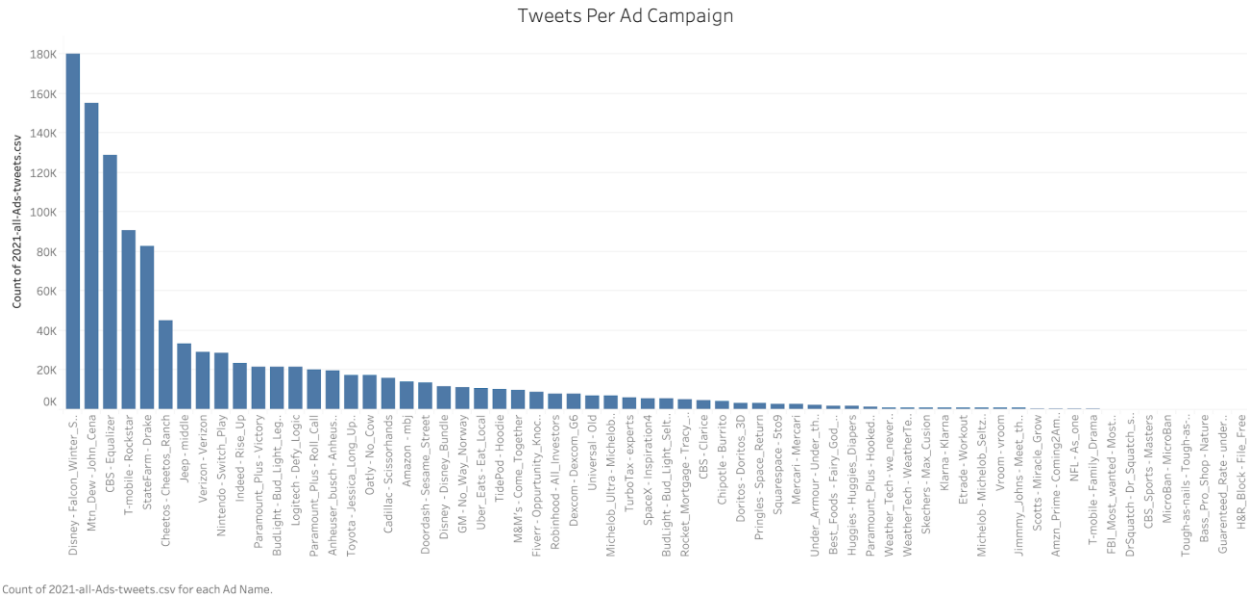
Analyzing the effectiveness of any specific ad campaign is problematic and challenging at best. It is often more art than science. This dynamic is compounded by the fact that different advertisers have different business models and, therefore, different visions and goals in mind with regard to advertising and how to measure its effectiveness. Therefore, this analysis will not attempt to draw any specific or exact conclusions from the data, but rather it will attempt to extract some broadly applicable insights that will help advertisers from various companies decide how to approach their Super Bowl ad spending in the future.

The data set that was analyzed was based on collecting metadata from approximately 1.3 million Tweets that were posted during the Super Bowl and for approximately 1.5 hours afterward. It's not difficult to see why simply analyzing data from Twitter is extremely inexact and even potentially problematic. Even so, using Twitter as a proxy for "Social Media Engagement" as a whole, analysts can gather useful insights about the effectiveness of Super Bowl ads.

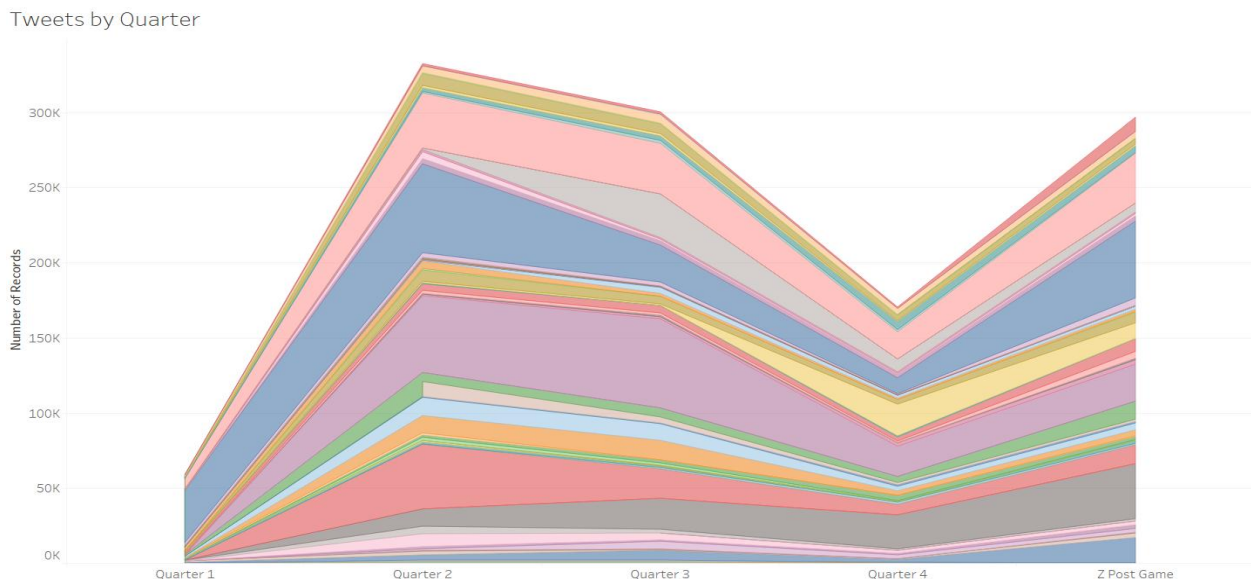
Therefore, this analysis was approached with an understanding of the imperfections that are naturally inherent in this type of social media data, and its measurements and analyses should be taken in the context of that imperfection.

# Using Tweet Volume as a Measure of Success

Some say that “all press is good press.” Therefore, success starts with the volume of tweets generated per ad. This was a simple yet effective gauge of how engaging (therefore successful) the Ad campaign was. To do this, the graph below was generated to show the number of ads by ad. The Top 3 winners were be Disney, Mountain Dew, and CBS, because they had the greatest volume of tweets.



The analysis also examined during which quarters the most Twitter activity occurred surrounding the advertisements. The 2<sup>nd</sup> and 3<sup>rd</sup> quarters had, by far, the highest activity.



## Return on Investment

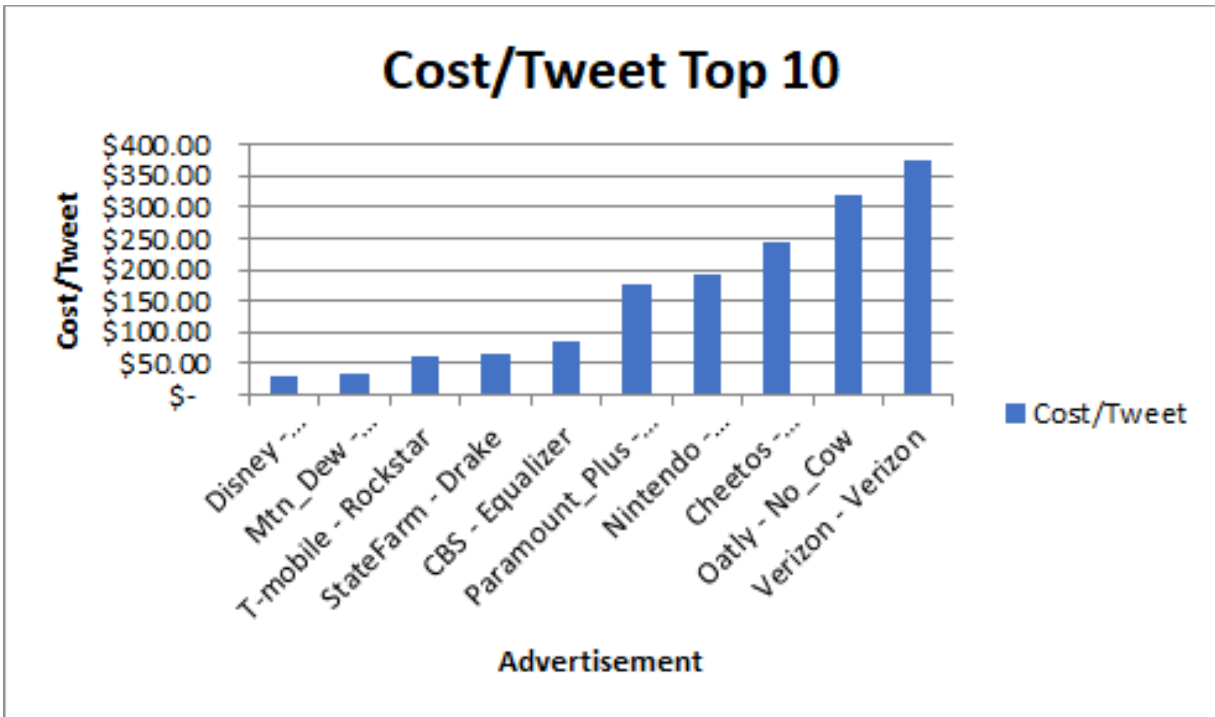
Advertisers paid approximately \$5.5 million dollars, or about \$183,000 per second, for a 30-second advertising spot during the Super Bowl this year. This analysis examined over a million Tweets from Twitter in order to find out which advertisers made the most of their investments, and which ones fell flat.

The following table shows advertisers' cost per Tweet, weighted by the number of seconds of advertising they paid for.

Ad Name	Tweets	Seconds Bought	Total Investment	Cost/Tweet
Disney - Falcon and the Winter Soldier	180126	30	\$ 5,500,000.00	\$ 30.53
Mtn Dew - John Cena	155217	30	\$ 5,500,000.00	\$ 35.43
T-mobile - Rockstar	90944	30	\$ 5,500,000.00	\$ 60.48
StateFarm - Drake	82655	30	\$ 5,500,000.00	\$ 66.54
CBS - Equalizer	128941	60	\$ 11,000,000.00	\$ 85.31
Paramount Plus - Roll Call	31290	30	\$ 5,500,000.00	\$ 175.78
Nintendo - Switch Play	28684	30	\$ 5,500,000.00	\$ 191.74
Cheetos - Cheetos Ranch	45044	60	\$ 11,000,000.00	\$ 244.21
Oatly - No Cow	17275	30	\$ 5,500,000.00	\$ 318.38
Verizon - Verizon	29403	60	\$ 11,000,000.00	\$ 374.11
Disney - Disney Bundle	11938	30	\$ 5,500,000.00	\$ 460.71
Indeed - Rise Up	23542	60	\$ 11,000,000.00	\$ 467.25
BudLight - Bud Light Legends	21565	60	\$ 11,000,000.00	\$ 510.09
Logitech - Defy Logic	21511	60	\$ 11,000,000.00	\$ 511.37
Paramount Plus - Victory	31408	90	\$ 16,500,000.00	\$ 525.34
Anheuser Busch - Anheuser Busch	19810	60	\$ 11,000,000.00	\$ 555.28
M&M's - Come Together	9756	30	\$ 5,500,000.00	\$ 563.76
Toyota - Jessica Long Upstream	17519	60	\$ 11,000,000.00	\$ 627.89
Jeep - Middle	33340	120	\$ 22,000,000.00	\$ 659.87
Robinhood - All Investors	8199	30	\$ 5,500,000.00	\$ 670.81
Dexcom - Dexcom G6	8165	30	\$ 5,500,000.00	\$ 673.61
Universal - Old	7135	30	\$ 5,500,000.00	\$ 770.85
Amazon - Michael B Jordan	13922	60	\$ 11,000,000.00	\$ 790.12
Doordash - Sesame Street	13687	60	\$ 11,000,000.00	\$ 803.68
SpaceX - Inspiration4	5516	30	\$ 5,500,000.00	\$ 997.10
Uber Eats - Eat Local	10914	60	\$ 11,000,000.00	\$ 1,007.88
Mercari - Mercari	2695	15	\$ 2,750,000.00	\$ 1,020.41
Cadillac - Scissorhands	15900	90	\$ 16,500,000.00	\$ 1,037.74
TidePod - Hoodie	10458	60	\$ 11,000,000.00	\$ 1,051.83
Fiverr - Opportunity Knocks	9049	60	\$ 11,000,000.00	\$ 1,215.60

TurboTax - Experts	6186	45	\$ 8,250,000.00	\$ 1,333.66
GM - No Way Norway	11234	90	\$ 16,500,000.00	\$ 1,468.76
Michelob Ultra - Michelob Ultra	6950	60	\$ 11,000,000.00	\$ 1,582.73
Pringles - Space Return	3241	30	\$ 5,500,000.00	\$ 1,697.01
Squarespace - 9 to 5	2881	30	\$ 5,500,000.00	\$ 1,909.06
Paramount Plus - Hooked It	2777	30	\$ 5,500,000.00	\$ 1,980.55
BudLight - Bud Light Seltzer	5446	60	\$ 11,000,000.00	\$ 2,019.83
Rocket Mortgage - Tracy Morgan	4989	60	\$ 11,000,000.00	\$ 2,204.85
Under Armour - Under the Armour	2366	30	\$ 5,500,000.00	\$ 2,324.60
CBS - Clarice	4620	60	\$ 11,000,000.00	\$ 2,380.95
Chipotle - Burrito	4360	60	\$ 11,000,000.00	\$ 2,522.94
WeatherTech - We Never Left	1929	30	\$ 5,500,000.00	\$ 2,851.22
WeatherTech - WeatherTech	1926	30	\$ 5,500,000.00	\$ 2,855.66
Best Foods - Fairy God Mayo	1730	30	\$ 5,500,000.00	\$ 3,179.19
Doritos - Doritos 3D	3458	60	\$ 11,000,000.00	\$ 3,181.03
Huggies - Huggies Diapers	1689	30	\$ 5,500,000.00	\$ 3,256.36
Skechers - Max Cushion	908	30	\$ 5,500,000.00	\$ 6,057.27
Klarna - Klarna	891	30	\$ 5,500,000.00	\$ 6,172.84
Etrade - Workout	880	30	\$ 5,500,000.00	\$ 6,250.00
Vroom - vroom	818	30	\$ 5,500,000.00	\$ 6,723.72
Amazon Prime - Coming 2 America	560	30	\$ 5,500,000.00	\$ 9,821.43
Scotts - Miracle Gro	697	45	\$ 8,250,000.00	\$ 11,836.44
Michelob - Michelob Seltzer	855	60	\$ 11,000,000.00	\$ 12,865.50
FBI Most wanted - Most Wanted	177	20	\$ 3,666,666.67	\$ 20,715.63
Jimmy Johns - Meet the King	808	105	\$ 19,250,000.00	\$ 23,824.26
T-mobile - Family Drama	361	60	\$ 11,000,000.00	\$ 30,470.91
NFL - As One	445	90	\$ 16,500,000.00	\$ 37,078.65
DrSquatch - Dr Squatch Soap	118	30	\$ 5,500,000.00	\$ 46,610.17
CBS Sports - Masters	106	30	\$ 5,500,000.00	\$ 51,886.79
MicroBan - MicroBan	79	30	\$ 5,500,000.00	\$ 69,620.25
Tough-as-nails - Tough-as-nails	47	30	\$ 5,500,000.00	\$ 117,021.28
Bass Pro Shop - Nature	17	60	\$ 11,000,000.00	\$ 647,058.82
Guaranteed Rate - Underdog	10	60	\$ 11,000,000.00	\$ 1,100,000.00
H&R Block - File Free	1	60	\$ 11,000,000.00	\$ 11,000,000.00

The top ten performers in terms of lowest cost per Tweet were Disney, Mountain Dew, T-Mobile, State Farm, CBS's Equalizer, Paramount Plus, Nintendo, Cheetos, Oatly, and Verizon. All of these advertisers invested less than \$400 per Tweet.



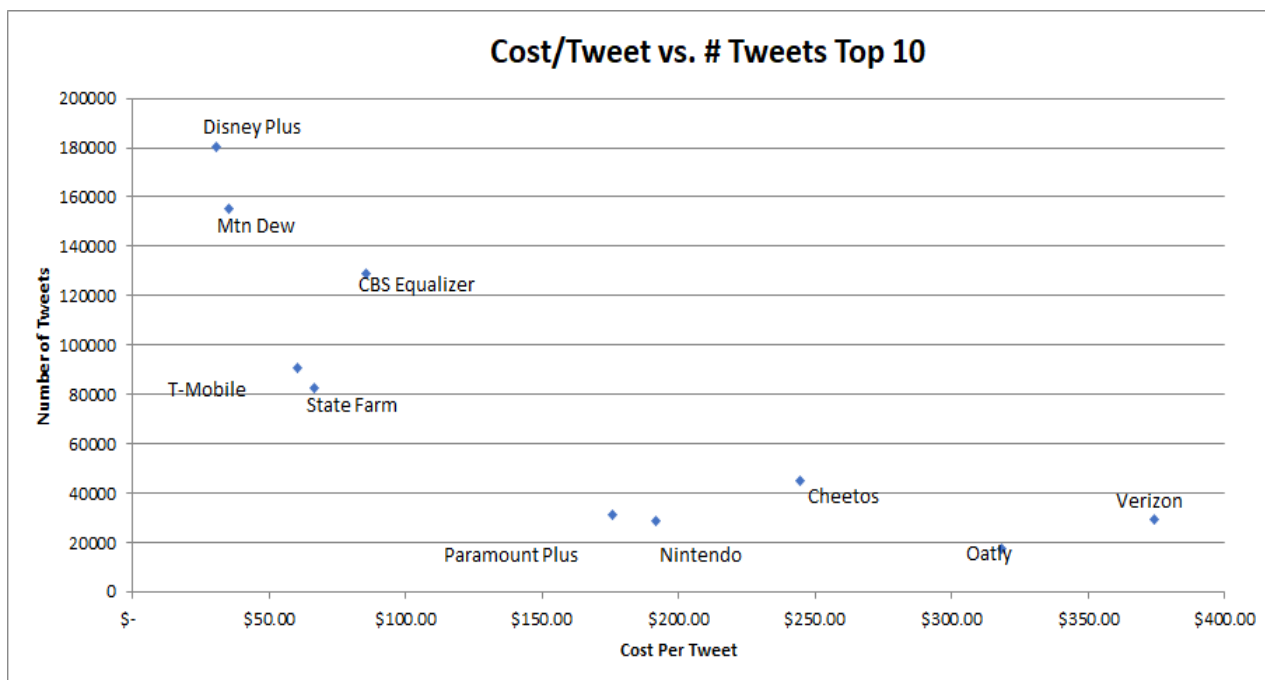
According to the analysis, only about 8% of the advertisers that ran ads during the Super Bowl ended up paying less than \$100 per Tweet received. The following information is useful in determining one possible “spectrum” for success based on a relative cost ranking.

PERCENTAGE OF ADVERTISERS THAT PAID LESS THAN	
\$100/Tweet	7.81%
\$1000/Tweet	39.06%
\$10,000/Tweet	79.69%

## Total Value Gained

Having established Cost/Tweet as a good proxy for each advertiser's relative cost of public engagement, the analysis goes further and attempts determine which advertisers not only paid the lowest cost for their Twitter engagement, but also got the most Twitter buzz from their Super Bowl commercials. This cross-analysis is another potentially useful representation of total value gained by each advertiser.

The Top 10 performers were Disney, Mountain Dew, CBS's Equalizer, T-Mobile, State Farm, Paramount Plus, Nintendo, Cheetos, Oatly, and Verizon.



## How Much Airtime Should Advertisers Buy?

Since Super Bowl ads are purchased in increments of seconds, the length of each ad is directly related to its cost. The analysis examined if paying for longer ads, i.e. spending more money, was correlated with a greater return in terms of Twitter engagement. Surprisingly, regression analysis showed a slight **negative** correlation between length of ad and Twitter engagement. The p-value was, however, too high to establish statistical significance, likely due to the small sample size.

It was determined that, of the Top 10 Performers in terms of ROI, 8 ran ads that were only 30 seconds in length. The other two ran ads that were 60 seconds in length, and one of those was a CBS affiliate, which likely affects their direct cost of advertising on CBS.



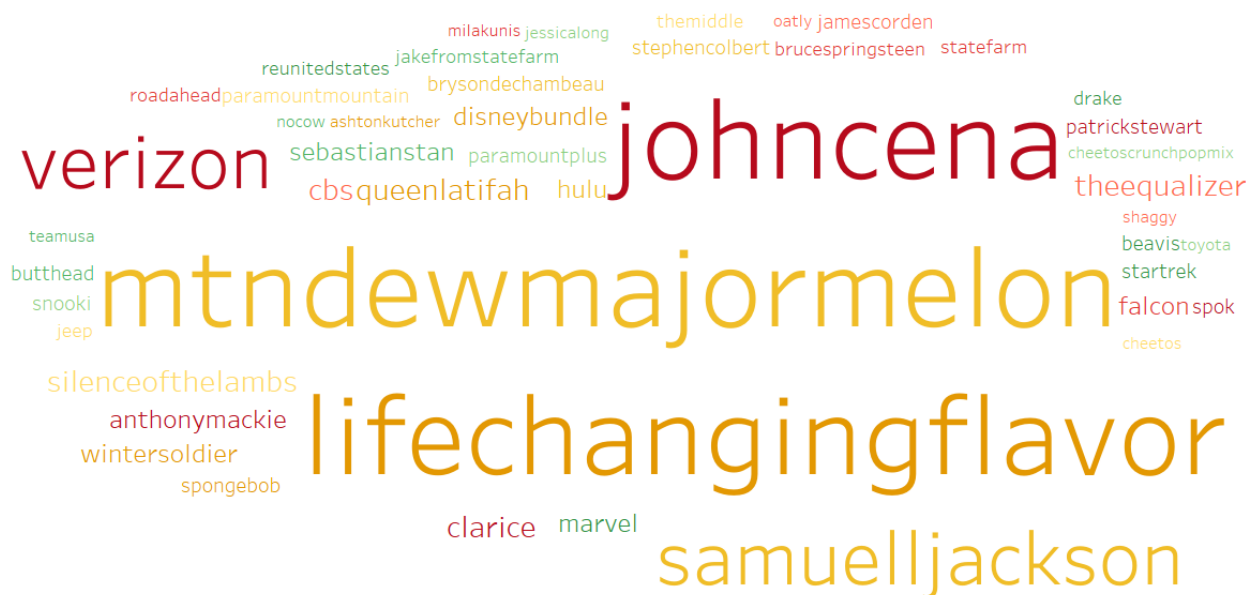
From the admittedly limited data, it was determined that there is no correlation between purchasing more advertisement time and engagement on Twitter. In fact, the data suggests that the average engagement from 30 second ad spots was approximately **34% HIGHER** than engagement for ads longer than 30 seconds. Furthermore, there is very little difference in standard deviation between the different ad lengths, suggesting that there is no evidence that length of advertisement has any bearing on the riskiness of the ad. These data points suggest that purchasing extra advertising time and creating longer ads is likely much less important than more qualitative metrics.

Twitter engagement on ads that were 30 seconds or less in length was approximately **34% HIGHER** than on longer ads...



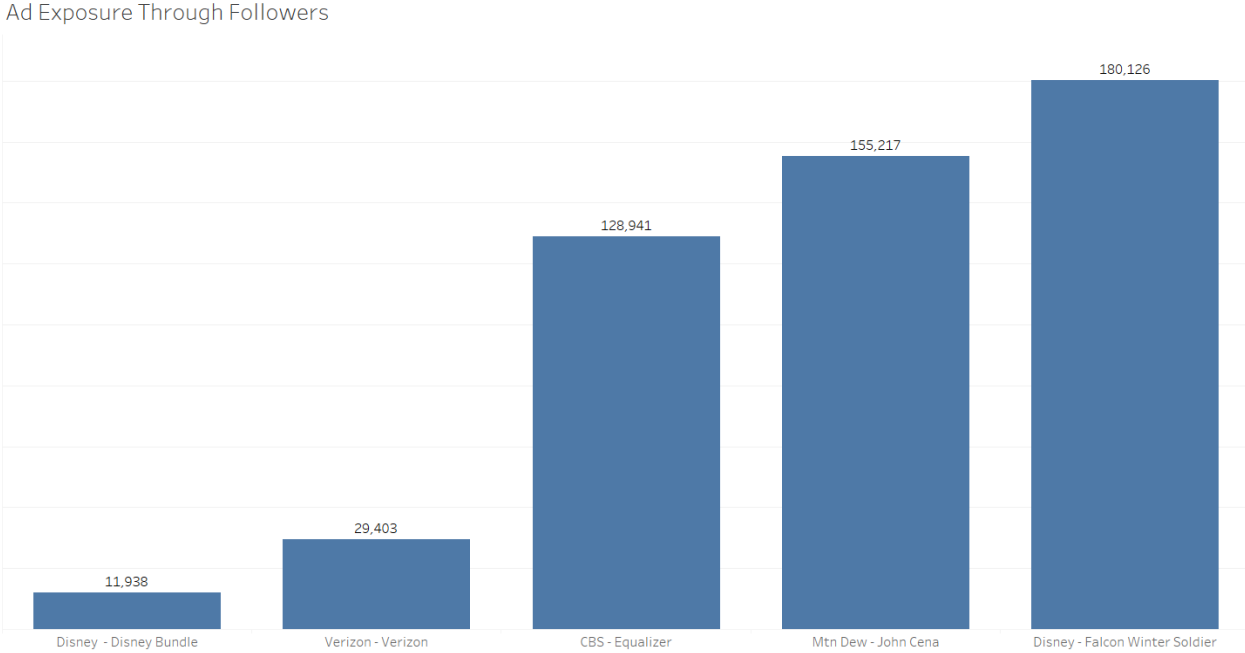
## Which Ad Had the Most Tweeted Keywords?

In an effort to further analyze the potential twitter response per ad, a word cloud visual was created. The key words were taken from each tweet and were then compared to the summation of the listed count of tweets. The key-word data was split out based on the presence of '[' punctuation, into 6 separate groups. The individual split out key-words were then pivoted into field values and added as marks in Tableau. The sum of the listed count of tweets was also added to the marks card but under the size adjustment. The results indicate that out of all of the ads, the Mountain Dew John Cena ad contained the largest count of key-words utilized in tweets, not Disney.



# Did Follower Count Affect Ad Tweet Response?

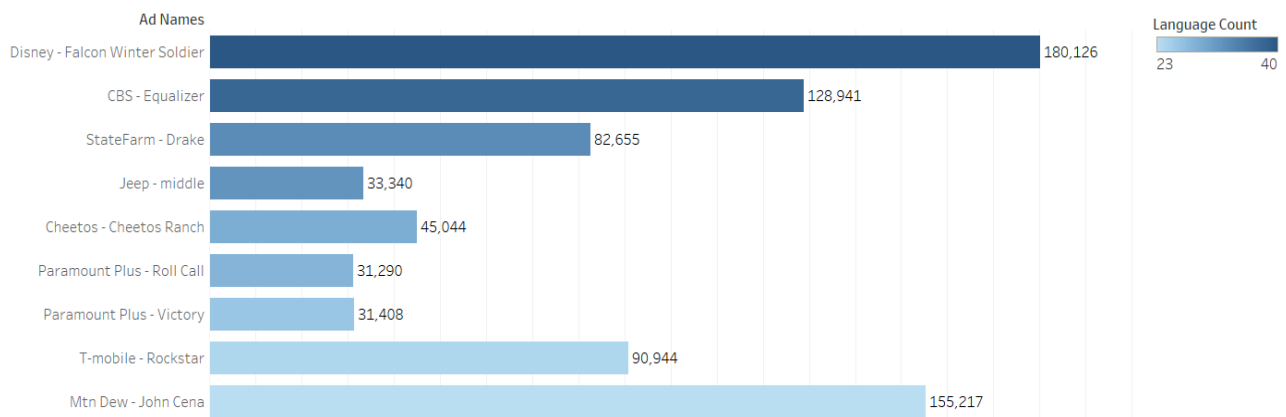
The below is a visual which exhibits if an ad received more replies on the basis of a higher follower count. At its core the distinct count of followers and the distinct tweet count were utilized to distinguish the impact of followers. Disney and Mountain Dew both top the list in relative exposure.



## Did the Language Used in the Tweet Affect Favorite Ads?

Analysis was conducted to determine if the number of languages of the responding tweets had any impact on whether an ad became a favorite or not. The below visual aims to show the count of languages used in response to the top 10 favorite ads. The Disney Falcon Winter Soldier ad was at the top of the favorites list and received responses in 40 different languages. Interestingly the second most favorite ad was the Mountain Dew John Cena ad, which received responses in only 23 languages. From the visual it appears that language response might have some impact on favorites as three of the top 5 ads within the visual had a higher language response, but two out of the five had some of the lowest responding language counts. When placed into the context of the overall visual, it appears that language response has less of an impact on favorites.

Count of Top 10 Favorited Ads by Language



## Conclusions and Insights

While it is difficult to draw any very specific conclusions from imperfect social media metadata, the following insights are broadly applicable and, if nothing else, merit further examination using broader data sets:

1. Different brands have different reasons for investing in Super Bowl Ads. Larger, more well-known brands, likely invest in advertising largely to maintain their social and culture status, while smaller brands may be more likely to be hoping for a boost to their bottom lines.
2. Larger, more well-known brands tend to receive larger volumes of social media engagement when they invest in Super Bowl advertising.
3. Cost per Tweet, while not a direct costing metric, can provide a financial spectrum with which to judge the success of an ad relative to the other ads that also advertised during the Super Bowl
4. This relative analysis can be further enhanced by cross-analyzing both marginal Cost per Tweet and Total Tweet volume. Within the limited scope of this analysis, this metric seems to be a decent proxy for overall value.
5. Keyword analysis is a great way for advertisers to gauge and target their engagement on social media. Even though Disney won in total volume, Mountain Dew appears to be the winner in keywords.
6. When gauging activity on social media, follower, retweet, favorite, and other peripheral metrics can be just as important, and can reveal secondary ad reach that isn't always apparent in the direct numbers.
7. In the age of global social media, the reach of advertising, even for American events like the Super Bowl, is global. Advertisers would do well to analyze more international points of data, like language in order to make determinations about what advertising channels fit their business model.